

What is claimed is:

1. In an image forming apparatus comprising at least an image carrier, charging means, exposing means and developing means, at least one of said charging means, said exposing means and said developing means is inhibited from being unlocked from said image forming apparatus when said image carrier is present on said image forming apparatus or is allowed to be unlocked from said image forming apparatus when said image carrier is absent on said image forming apparatus.

2. The apparatus as claimed in claim 1, wherein indication means indicative of a dismounting order is provided on said charging means, said exposing means and said developing means.

3. The apparatus as claimed in claim 1, wherein said image carrier belongs to a unit independent of a unit to which said charging means, said exposing means and said developing means belong.

4. In an image forming apparatus comprising at least an image carrier, charging means, exposing means and developing means, at least one of said charging means, said exposing means and said developing means is inhibited from being dismounted from said image forming apparatus when said image carrier is present on said image forming apparatus or is allowed to be dismounted from said image

forming apparatus when said image carrier is absent on said image forming apparatus.

5. The apparatus as claimed in claim 4, wherein indication means indicative of a dismounting order is provided on said charging means, said exposing means and said developing means.

6. The apparatus as claimed in claim 4, wherein said image carrier belongs to a unit independent of a unit to which said charging means, said exposing means and said developing means belong.

7. In an image forming apparatus comprising at least an image carrier, charging means, exposing means and developing means, at least one of said charging means, said exposing means and said developing means is unlocked from said image forming apparatus after said image carrier has been dismounted from said image forming apparatus.

8. The apparatus as claimed in claim 7, wherein indication means indicative of a dismounting order is provided on said charging means, said exposing means and said developing means.

9. The apparatus as claimed in claim 7, wherein said image carrier belongs to a unit independent of a unit to which said charging means, said exposing means and said developing means belong.

10. In an image forming apparatus comprising at least

an image carrier, charging means, exposing means and developing means, at least one of said charging means, said exposing means and said developing means is allowed to be mounted to or dismounted from said image forming apparatus after said image carrier has been dismounted from said image forming apparatus.

11. The apparatus as claimed in claim 10, wherein indication means indicative of a dismounting order is provided on said charging means, said exposing means and said developing means.

12. The apparatus as claimed in claim 10, wherein said image carrier belongs to a unit independent of a unit to which said charging means, said exposing means and said developing means belong.

13. In an image forming apparatus comprising at least an image carrier, charging means, exposing means and developing means, said image carrier is allowed to be mounted to said image forming apparatus after at least one of said charging means, said exposing means and said developing means has been mounted to said image forming apparatus.

14. The apparatus as claimed in claim 13, wherein indication means indicative of a dismounting order is provided on said charging means, said exposing means and said developing means.

15. The apparatus as claimed in claim 13, wherein said image carrier belongs to a unit independent of a unit to which said charging means, said exposing means and said developing means belong.

16. In an image forming apparatus comprising at least an image carrier, charging means, exposing means and developing means, said image carrier is allowed to be mounted to said image forming apparatus after at least one of said charging means, said exposing means and said developing means has been locked to said image forming apparatus.

17. The apparatus as claimed in claim 16, wherein indication means indicative of a dismounting order is provided on said charging means, said exposing means and said developing means.

18. The apparatus as claimed in claim 16, wherein said image carrier belongs to a unit independent of a unit to which said charging means, said exposing means and said developing means belong.

19. In an image forming apparatus for forming an image on an image carrier with a developing device and transferring said image from said image carrier to a recording means, said image carrier is mounted to or dismounted from said image forming apparatus independently of said developing device, and

said developing device is locked to said image forming apparatus when said image carrier is mounted to or dismounted from said image forming apparatus.

20. The apparatus as claimed in claim 19, wherein said image carrier is mounted to or dismounted from said developing means.

21. The apparatus as claimed in claim 19, wherein a toner storage for replenishing toner to said developing device is provided independently of said developing means.

22. The apparatus as claimed in claim 19, wherein cleaning means is provided for removing toner left on said image carrier after image transfer, and toner discharging means for discharging said toner removed by said cleaning means is provided independently of said cleaning means.

23. The apparatus as claimed in claim 19, wherein transferring means for transferring the image retracts when said image carrier is mounted or dismounted so as not to interfere with said image carrier.

24. The apparatus as claimed in claim 19, wherein said image carrier is mounted or dismounted in a direction in which said image carrier leaves an axis of said image carrier held in a preselected operative position.

25. In an image forming apparatus for forming an image on an image carrier with a developing device and transferring said image from said image carrier to a

recording means, said image carrier and said developing device are mounted to or dismounted from said image forming apparatus independently of each other, and

 said developing device is unable to be dismounted from said image forming apparatus before said image carrier.

26. The apparatus as claimed in claim 25, wherein locking means is provided for locking said developing device to said apparatus and inhibited from being unlocked before said image carrier is dismounted.

27. The apparatus as claimed in claim 26, wherein when said locking means is unlocked, said image carrier is inhibited from being mounted to said apparatus.

28. The apparatus as claimed in claim 25, wherein said image carrier is mounted to or dismounted from said developing means.

29. The apparatus as claimed in claim 25, wherein a toner storage for replenishing toner to said developing device is provided independently of said developing means.

30. The apparatus as claimed in claim 25, comprising:
 cleaning means for removing toner left on said image carrier after image transfer; and
 toner discharging means independent of said cleaning means for discharging the toner removed by said cleaning means.

31. The apparatus as claimed in claim 25, wherein transferring means for transferring the image retracts when said image carrier is mounted or dismounted so as not to interfere with said image carrier.

32. The apparatus as claimed in claim 25, wherein said image carrier is mounted or dismounted in a direction in which said image carrier leaves an axis of said image carrier held in a preselected operative position.

33. A method of dismounting an image carrier and a developing device from an image forming apparatus, said method comprising the steps of:

dismounting the image carrier from the image forming apparatus to thereby unlock said developing device from said image forming apparatus; and

dismounting the developing device from the image forming apparatus.

34. A method of mounting an image carrier and a developing device to an image forming apparatus, said method comprising the steps of:

mounting the developing device to the image forming apparatus and locking said developing device to said image forming apparatus; and

mounting the image carrier to the image forming apparatus.

35. In a body of an image forming section removably

mounted to an image forming apparatus and including at least one of charging means, developing means, discharging means and cleaning means adjoining an image carrier, said image carrier is removable.

36. In an image carrier for forming a latent image thereon, an image forming section including at least one of charging means, exposing means and developing means is removably mounted to an image forming apparatus, and

said image carrier is allowed to be mounted to or dismounted from said image forming section after said image forming section has been locked to said image forming apparatus.

37. In an image forming apparatus comprising image forming means for forming an image on an image carrier, at least one of means constituting said image forming means is locked to said image forming apparatus when said image carrier is present on said image carrier or allowed to be unlocked from said image forming apparatus when said image carrier is absent on said image forming means, and

said image forming means is positioned around said image carrier at a side opposite to a side where said image carrier is to be dismounted.

38. The apparatus as claimed in claim 37, wherein said image forming means comprises at least a charger, a developing device, discharging means, and cleaning means.

39. The apparatus as claimed in claim 38, wherein said image carrier comprises an image carrier cassette constructed integrally with associated members including a support member that rotatably supports said image carrier.

40. The apparatus as claimed in claim 38, wherein said developing device is locked to said apparatus via said body when said image carrier is mounted to or dismounted from said apparatus, and

 said image carrier is mounted to said apparatus via said body.

41. The apparatus as claimed in claim 40, wherein said developing device is able to be mounted to or dismounted from said apparatus together with said body that holds said developing device.

42. The apparatus as claimed in claim 40, wherein said body holding said developing device comprises developing device holding means including a handle portion to be held by hand when said body is mounted to or dismounted from said apparatus and a lock portion for locking said body to said apparatus.

43. The apparatus as claimed in claim 42, wherein said handle portion is angularly movable relative to said body to which said developing device is mounted and causes, when angularly moved, said lock portion to engage with a

lug protruding from said image forming apparatus to thereby lock said body to said image forming apparatus.

44. The apparatus as claimed in claim 38, wherein said developing device is removable from said apparatus, and

connecting/disconnecting means is provided for disconnecting, when said developing device is dismounted from said apparatus, a developer path connecting said apparatus and said developing device at a joint between said apparatus and said developing device or connecting said developer path when said developing device is mounted to said apparatus.

45. The apparatus as claimed in claim 38, wherein said connecting/disconnecting means comprises:

a developer conveying screw selectively movable toward or away from a developer conveying screw included in said developing device to be connected to or disconnected from said developer conveyor screw of said developing device; and

moving means for causing said developer conveying screw of said connecting/disconnecting means toward or away from said developer conveying screw of said developing device in interlocked relation to an angular movement of said lock portion.

46. The apparatus as claimed in claim 45, wherein

said moving means comprises:

 biasing means for constantly biasing said developer conveying screw of said apparatus away from said developer conveying screw of said developing device; and

 a coupling/uncoupling member rotated by an angular movement of said lock portion in a locking direction for coupling said developer conveying screw of said apparatus and said developer conveying screw of said developing device against an action of said biasing means or rotated by an angular movement of said lock portion in an unlocking direction for uncoupling said developing conveying screws.

47. The apparatus as claimed in claim 38, further comprising:

 a cleaning device for removing a developer left on an image carrier after image transfer; and

 connecting/disconnecting means for disconnecting, when said cleaning device is dismounted from said apparatus, a developer path connecting said apparatus and said cleaning device to convey the developer removed by said cleaning device toward said apparatus at a joint between said apparatus and said cleaning device or connecting, when said developing device is mounted to said apparatus, said developer path at said joint.

48. The apparatus as claimed in claim 37, wherein

assuming that said image carrier comprises a photoconductive drum, the side opposite to the side where said image carrier is to be dismounted is a region adjoining said photoconductive drum and downstream of said side where said image carrier is to be dismounted with respect to a plane that is perpendicular to a dismounting direction of said photoconductive drum and contains an axis of said photoconductive drum.

49. The apparatus as claimed in claim 37, wherein said image forming means is constructed into a unit constituting a body, and

 said image carrier is mounted to or dismounted from said body as an image carrier unit including members associated therewith.

50. The apparatus as claimed in claim 49, wherein said image carrier is removable from said apparatus independently of said developing device, and

 said apparatus further comprises image carrier holding means including image carrier locking means for locking said image carrier to said body by engaging with a lug included in said body.

51. The apparatus as claimed in claim 50, wherein said image carrier holding means is angularly movable relative to said image carrier, and

 said image carrier is locked to said apparatus when

said image carrier locking means, which is mounted on a shaft of said image carrier holding means, is engaged with said lug of said body.

52. The apparatus as claimed in claim 37, wherein an image transferring device faces said image carrier at a side opposite to a side where said image forming means is positioned with respect to said image carrier, and

said image transferring device is constructed integrally with a roller, which feeds a recording medium to said image transferring device, and angularly movable about an axis of said roller to thereby retract from a position above a dismounting direction of said image carrier.

53. The apparatus as claimed in claim 52, wherein said image carrier comprises image carrier holding means including a handle portion to be held by hand and a lock portion for locking said image transferring device to a body of an image forming section.

54. The apparatus as claimed in claim 53, wherein said image carrier holding means positions said image transferring means relative to said image carrier when angularly moved to lock said image carrier to said body.

55. The apparatus as claimed in claim 54, wherein said image carrier is removable from said apparatus independently of said developing means, and

said apparatus further comprises image carrier holding means including image carrier locking means for locking said image carrier to said body by engaging with a lug included in said body.

56. The apparatus as claimed in claim 55, wherein said image carrier holding means is angularly movable relative to said image carrier, and

said image carrier is locked to said apparatus when said image carrier locking means, which is mounted on a shaft of said image carrier holding means, is engaged with said lug of said body.

57. In an image forming apparatus comprising image forming means for forming an image on an image carrier, at least one of means constituting said image forming means is inhibited from being dismounted from said image forming apparatus when said image carrier is present on said image forming apparatus or allowed to be dismounted when said image carrier is absent on said image forming apparatus, and

said image forming means is positioned at a side around said image carrier opposite to a side where said image carrier is to be dismounted.

58. The apparatus as claimed in claim 57, wherein said image forming means comprises at least a charger, a developing device, discharging means, and cleaning means.

59. The apparatus as claimed in claim 58, wherein said image carrier comprises an image carrier cassette constructed integrally with associated members including a support member that rotatably supports said image carrier.

60. The apparatus as claimed in claim 58, wherein said developing device is locked to said apparatus via said body when said image carrier is mounted to or dismounted from said apparatus, and

 said image carrier is mounted to said apparatus via said body.

61. The apparatus as claimed in claim 60, wherein said developing device is able to be mounted to or dismounted from said apparatus together with said body that holds said developing device.

62. The apparatus as claimed in claim 60, wherein said body holding said developing device comprises developing device holding means including a handle portion to be held by hand when said body is mounted to or dismounted from said apparatus and a lock portion for locking said body to said apparatus.

63. The apparatus as claimed in claim 58, wherein said handle portion is angularly movable relative to said body to which said developing device is mounted and causes, when angularly moved, said lock portion to engage with a

lug protruding from said image forming apparatus to thereby lock said body to said image forming apparatus.

64. The apparatus as claimed in claim 58, wherein said developing device is removable from said apparatus, and

connecting/disconnecting means is provided for disconnecting, when said developing device is dismounted from said apparatus, a developer path connecting said apparatus and said developing device at a joint between said apparatus and said developing device or connecting said developer path when said developing device is mounted to said apparatus.

65. The apparatus as claimed in claim 58, wherein said connecting/disconnecting means comprises:

a developer conveying screw selectively movable toward or away from a developer conveying screw included in said developing device to be connected to or disconnected from said developer conveyor screw of said developing device; and

moving means for causing said developer conveying screw of said connecting/disconnecting means toward or away from said developer conveying screw of said developing device in interlocked relation to an angular movement of said lock portion.

66. The apparatus as claimed in claim 58, wherein

said moving means comprises:

 biasing means for constantly biasing said developer conveying screw of said apparatus away from said developer conveying screw of said developing device; and

 a coupling/uncoupling member rotated by an angular movement of said lock portion in a locking direction for coupling said developer conveying screw of said apparatus and said developer conveying screw of said developing device against an action of said biasing means or rotated by an angular movement of said lock portion in an unlocking direction for uncoupling said developing conveying screws.

67. The apparatus as claimed in claim 58, further comprising:

 a cleaning device for removing a developer left on an image carrier after image transfer; and

 connecting/disconnecting means for disconnecting, when said cleaning device is dismounted from said apparatus, a developer path connecting said apparatus and said cleaning device to convey the developer removed by said cleaning device toward said apparatus at a joint between said apparatus and said cleaning device or connecting, when said developing device is mounted to said apparatus, said developer path at said joint.

68. The apparatus as claimed in claim 57, wherein

assuming that said image carrier comprises a photoconductive drum, the side opposite to the side where said image carrier is to be dismounted is a region adjoining said photoconductive drum and downstream of said side where said image carrier is to be dismounted with respect to a plane that is perpendicular to a dismounting direction of said photoconductive drum and contains an axis of said photoconductive drum.

69. The apparatus as claimed in claim 57, wherein said image forming means is constructed into a unit constituting a body, and

said image carrier is mounted to or dismounted from said body as an image carrier unit including members associated therewith.

70. The apparatus as claimed in claim 69, wherein said image carrier is removable from said apparatus independently of said developing device, and

said apparatus further comprises image carrier holding means including image carrier locking means for locking said image carrier to said body by engaging with a lug included in said body.

71. The apparatus as claimed in claim 70, wherein said image carrier holding means is angularly movable relative to said image carrier, and

said image carrier is locked to said apparatus when

said image carrier locking means, which is mounted on a shaft of said image carrier holding means, is engaged with said lug of said body.

72. The apparatus as claimed in claim 57, wherein an image transferring device faces said image carrier at a side opposite to a side where said image forming means is positioned with respect to said image carrier, and

said image transferring device is constructed integrally with a roller, which feeds a recording medium to said image transferring device, and angularly movable about an axis of said roller to thereby retract from a position above a dismounting direction of said image carrier.

73. The apparatus as claimed in claim 72, wherein said image carrier comprises image carrier holding means including a handle portion to be held by hand and a lock portion for locking said image transferring device to a body of an image forming section.

74. The apparatus as claimed in claim 73, wherein said image carrier holding means positions said image transferring means relative to said image carrier when angularly moved to lock said image carrier to said body.

75. The apparatus as claimed in claim 74, wherein said image carrier is removable from said apparatus independently of said developing means, and

said apparatus further comprises image carrier holding means including image carrier locking means for locking said image carrier to said body by engaging with a lug included in said body.

76. The apparatus as claimed in claim 75, wherein said image carrier holding means is angularly movable relative to said image carrier, and

said image carrier is locked to said apparatus when said image carrier locking means, which is mounted on a shaft of said image carrier holding means, is engaged with said lug of said body.

77. In an image forming apparatus comprising image forming means for forming an image on an image carrier, at least one of means constituting said image forming means is unlocked from said image forming apparatus after said image carrier has been unlocked from said image forming apparatus or unlockable from said image forming apparatus when said image carrier is absent on said image forming apparatus, and

said image forming means is positioned at a side around said image carrier opposite to a side where said image carrier is to be dismounted.

78. The apparatus as claimed in claim 77, wherein said image forming means comprises at least a charger, a developing device, discharging means, and cleaning means.

79. The apparatus as claimed in claim 78, wherein said image carrier comprises an image carrier cassette constructed integrally with associated members including a support member that rotatably supports said image carrier.

80. The apparatus as claimed in claim 78, wherein said developing device is locked to said apparatus via said body when said image carrier is mounted to or dismounted from said apparatus, said image carrier being mounted to said apparatus via said body.

81. The apparatus as claimed in claim 80, wherein said developing device is able to be mounted to or dismounted from said apparatus together with said body that holds said developing device.

82. The apparatus as claimed in claim 80, wherein said body holding said developing device comprises developing device holding means including a handle portion to be held by hand when said body is mounted to or dismounted from said apparatus and a lock portion for locking said body to said apparatus.

83. The apparatus as claimed in claim 82, wherein said handle portion is angularly movable relative to said body to which said developing device is mounted and causes, when angularly moved, said lock portion to engage with a lug protruding from said image forming apparatus to

thereby lock said body to said image forming apparatus.

84. The apparatus as claimed in claim 78, wherein said developing device is removable from said apparatus, and

connecting/disconnecting means is provided for disconnecting, when said developing device is dismounted from said apparatus, a developer path connecting said apparatus and said developing device at a joint between said apparatus and said developing device or connecting said developer path when said developing device is mounted to said apparatus.

85. The apparatus as claimed in claim 78, wherein said connecting/disconnecting means comprises:

a developer conveying screw selectively movable toward or away from a developer conveying screw included in said developing device to be connected to or disconnected from said developer conveyor screw of said developing device; and

moving means for causing said developer conveying screw of said connecting/disconnecting means toward or away from said developer conveying screw of said developing device in interlocked relation to an angular movement of said lock portion.

86. The apparatus as claimed in claim 78, wherein said moving means comprises:

biasing means for constantly biasing said developer conveying screw of said apparatus away from said developer conveying screw of said developing device; and

a coupling/uncoupling member rotated by an angular movement of said lock portion in a locking direction for coupling said developer conveying screw of said apparatus and said developer conveying screw of said developing device against an action of said biasing means or rotated by an angular movement of said lock portion in an unlocking direction for uncoupling said developing conveying screws.

87. The apparatus as claimed in claim 78, further comprising:

a cleaning device for removing a developer left on an image carrier after image transfer; and

connecting/disconnecting means for disconnecting, when said cleaning device is dismounted from said apparatus, a developer path connecting said apparatus and said cleaning device to convey the developer removed by said cleaning device toward said apparatus at a joint between said apparatus and said cleaning device or connecting, when said developing device is mounted to said apparatus, said developer path at said joint.

88. The apparatus as claimed in claim 77, wherein assuming that said image carrier comprises a

photoconductive drum, the side opposite to the side where said image carrier is to be dismounted is a region adjoining said photoconductive drum and downstream of said side where said image carrier is to be dismounted with respect to a plane that is perpendicular to a dismounting direction of said photoconductive drum and contains an axis of said photoconductive drum.

89. The apparatus as claimed in claim 77, wherein said image forming means is constructed into a unit constituting a body, and said image carrier is mounted to or dismounted from said body as an image carrier unit including members associated therewith.

90. The apparatus as claimed in claim 89, wherein said image carrier is removable from said apparatus independently of said developing device, and

said apparatus further comprises image carrier holding means including image carrier locking means for locking said image carrier to said body by engaging with a lug included in said body.

91. The apparatus as claimed in claim 90, wherein said image carrier holding means is angularly movable relative to said image carrier, and

said image carrier is locked to said apparatus when said image carrier locking means, which is mounted on a shaft of said image carrier holding means, is engaged with

said lug of said body.

92. The apparatus as claimed in claim 77, wherein an image transferring device faces said image carrier at a side opposite to a side where said image forming means is positioned with respect to said image carrier, and

said image transferring device is constructed integrally with a roller, which feeds a recording medium to said image transferring device, and angularly movable about an axis of said roller to thereby retract from a position above a dismounting direction of said image carrier.

93. The apparatus as claimed in claim 92, wherein said image carrier comprises image carrier holding means including a handle portion to be held by hand and a lock portion for locking said image transferring device to a body of an image forming section.

94. The apparatus as claimed in claim 93, wherein said image carrier holding means positions said image transferring means relative to said image carrier when angularly moved to lock said image carrier to said body.

95. The apparatus as claimed in claim 94, wherein said image carrier is removable from said apparatus independently of said developing means, and

said apparatus further comprises image carrier holding means including image carrier locking means for

locking said image carrier to said body by engaging with a lug included in said body.

96. The apparatus as claimed in claim 95, wherein said image carrier holding means is angularly movable relative to said image carrier, and

said image carrier is locked to said apparatus when said image carrier locking means, which is mounted on a shaft of said image carrier holding means, is engaged with said lug of said body.

97. In an image forming apparatus comprising image forming means for forming an image on an image carrier, at least one of means constituting said image forming means is unlocked from said image forming apparatus after said image carrier has been dismounted from said image forming apparatus or unlockable from said image forming apparatus when said image carrier is absent on said image forming apparatus, and

said image forming means is positioned at a side around said image carrier opposite to a side where said image carrier is to be dismounted.

98. The apparatus as claimed in claim 97, wherein said image forming means comprises at least a charger, a developing device, discharging means, and cleaning means.

99. The apparatus as claimed in claim 98, wherein said image carrier comprises an image carrier cassette

constructed integrally with associated members including a support member that rotatably supports said image carrier.

100. The apparatus as claimed in claim 98, wherein said developing device is locked to said apparatus via said body when said image carrier is mounted to or dismounted from said apparatus, said image carrier being mounted to said apparatus via said body.

101. The apparatus as claimed in claim 100, wherein said developing device is able to be mounted to or dismounted from said apparatus together with said body that holds said developing device.

102. The apparatus as claimed in claim 100, wherein said body holding said developing device comprises developing device holding means including a handle portion to be held by hand when said body is mounted to or dismounted from said apparatus and a lock portion for locking said body to said apparatus.

103. The apparatus as claimed in claim 102, wherein said handle portion is angularly movable relative to said body to which said developing device is mounted and causes, when angularly moved, said lock portion to engage with a lug protruding from said image forming apparatus to thereby lock said body to said image forming apparatus.

104. The apparatus as claimed in claim 98, wherein

said developing device is removable from said apparatus, and

connecting/disconnecting means is provided for disconnecting, when said developing device is dismounted from said apparatus, a developer path connecting said apparatus and said developing device at a joint between said apparatus and said developing device or connecting said developer path when said developing device is mounted to said apparatus.

105. The apparatus as claimed in claim 98, wherein said connecting/disconnecting means comprises:

a developer conveying screw, selectively movable toward or away from a developer conveying screw included in said developing device to be connected to or disconnected from said developer conveyor screw of said developing device; and

moving means for causing said developer conveying screw of said connecting/disconnecting means toward or away from said developer conveying screw of said developing device in interlocked relation to an angular movement of said lock portion.

106. The apparatus as claimed in claim 98, wherein said moving means comprises:

biasing means for constantly biasing said developer conveying screw of said apparatus away from said developer

conveying screw of said developing device; and
a coupling/uncoupling member rotated by an angular movement of said lock portion in a locking direction for coupling said developer conveying screw of said apparatus and said developer conveying screw of said developing device against an action of said biasing means or rotated by an angular movement of said lock portion in an unlocking direction for uncoupling said developing conveying screws.

107. The apparatus as claimed in claim 98, further comprising:

a cleaning device for removing a developer left on an image carrier after image transfer; and

connecting/disconnecting means for disconnecting, when said cleaning device is dismounted from said apparatus, a developer path connecting said apparatus and said cleaning device to convey the developer removed by said cleaning device toward said apparatus at a joint between said apparatus and said cleaning device or connecting, when said developing device is mounted to said apparatus, said developer path at said joint.

108. The apparatus as claimed in claim 97, wherein assuming that said image carrier comprises a photoconductive drum, the side opposite to the side where said image carrier is to be dismounted is a region adjoining

said photoconductive drum and downstream of said side where said image carrier is to be dismounted with respect to a plane that is perpendicular to a dismounting direction of said photoconductive drum and contains an axis of said photoconductive drum.

109. The apparatus as claimed in claim 97, wherein said image forming means is constructed into a unit constituting a body, and said image carrier is mounted to or dismounted from said body as an image carrier unit including members associated therewith.

110. The apparatus as claimed in claim 109, wherein said image carrier is removable from said apparatus independently of said developing device, and

said apparatus further comprises image carrier holding means including image carrier locking means for locking said image carrier to said body by engaging with a lug included in said body.

111. The apparatus as claimed in claim 110, wherein said image carrier holding means is angularly movable relative to said image carrier, and

said image carrier is locked to said apparatus when said image carrier locking means, which is mounted on a shaft of said image carrier holding means, is engaged with said lug of said body.

112. The apparatus as claimed in claim 97, wherein

an image transferring device faces said image carrier at a side opposite to a side where said image forming means is positioned with respect to said image carrier, and said image transferring device is constructed integrally with a roller, which feeds a recording medium to said image transferring device, and angularly movable about an axis of said roller to thereby retract from a position above a dismounting direction of said image carrier.

113. The apparatus as claimed in claim 112, wherein said image carrier comprises image carrier holding means including a handle portion to be held by hand and a lock portion for locking said image transferring device to a body of an image forming section.

114. The apparatus as claimed in claim 113, wherein said image carrier holding means positions said image transferring means relative to said image carrier when angularly moved to lock said image carrier to said body.

115. The apparatus as claimed in claim 114, wherein said image carrier is removable from said apparatus independently of said developing means, and

said apparatus further comprises image carrier holding means including image carrier locking means for locking said image carrier to said body by engaging with a lug included in said body.

116. The apparatus as claimed in claim 115, wherein

said image carrier holding means is angularly movable relative to said image carrier, and

said image carrier is locked to said apparatus when said image carrier locking means, which is mounted on a shaft of said image carrier holding means, is engaged with said lug of said body.

117. In an image forming apparatus comprising image forming means for forming an image on an image carrier, said image forming means is positioned at a side around said image carrier opposite to a side where said image carrier is to be dismounted, and at least one of means constituting said image forming means is removable from said image forming apparatus after said image carrier has been dismounted from said image forming apparatus.

118. The apparatus as claimed in claim 117, wherein said image forming means comprises at least a charger, a developing device, discharging means, and cleaning means.

119. The apparatus as claimed in claim 118, wherein said image carrier comprises an image carrier cassette constructed integrally with associated members including a support member that rotatably supports said image carrier.

120. The apparatus as claimed in claim 118, wherein said developing device is locked to said apparatus via said body when said image carrier is mounted to or dismounted

from said apparatus, said image carrier being mounted to said apparatus via said body.

121. The apparatus as claimed in claim 120, wherein said developing device is able to be mounted to or dismounted from said apparatus together with said body that holds said developing device.

122. The apparatus as claimed in claim 120, wherein said body holding said developing device comprises developing device holding means including a handle portion to be held by hand when said body is mounted to or dismounted from said apparatus and a lock portion for locking said body to said apparatus.

123. The apparatus as claimed in claim 122, wherein said handle portion is angularly movable relative to said body to which said developing device is mounted and causes, when angularly moved, said lock portion to engage with a lug protruding from said image forming apparatus to thereby lock said body to said image forming apparatus.

124. The apparatus as claimed in claim 118, wherein said developing device is removable from said apparatus, and

connecting/disconnecting means is provided for disconnecting, when said developing device is dismounted from said apparatus, a developer path connecting said apparatus and said developing device at a joint between

said apparatus and said developing device or connecting said developer path when said developing device is mounted to said apparatus.

125. The apparatus as claimed in claim 118, wherein said connecting/disconnecting means comprises:

a developer conveying screw selectively movable toward or away from a developer conveying screw included in said developing device to be connected to or disconnected from said developer conveyor screw of said developing device; and

moving means for causing said developer conveying screw of said connecting/disconnecting means toward or away from said developer conveying screw of said developing device in interlocked relation to an angular movement of said lock portion.

126. The apparatus as claimed in claim 118, wherein said moving means comprises:

biasing means for constantly biasing said developer conveying screw of said apparatus away from said developer conveying screw of said developing device; and

a coupling/uncoupling member rotated by an angular movement of said lock portion in a locking direction for coupling said developer conveying screw of said apparatus and said developer conveying screw of said developing device against an action of said biasing means or rotated

by an angular movement of said lock portion in an unlocking direction for uncoupling said developing conveying screws.

127. The apparatus as claimed in claim 118, further comprising:

a cleaning device for removing a developer left on an image carrier after image transfer; and

connecting/disconnecting means for disconnecting, when said cleaning device is dismounted from said apparatus, a developer path connecting said apparatus and said cleaning device to convey the developer removed by said cleaning device toward said apparatus at a joint between said apparatus and said cleaning device or connecting, when said developing device is mounted to said apparatus, said developer path at said joint.

128. The apparatus as claimed in claim 117, wherein assuming that said image carrier comprises a photoconductive drum, the side opposite to the side where said image carrier is to be dismounted is a region adjoining said photoconductive drum and downstream of said side where said image carrier is to be dismounted with respect to a plane that is perpendicular to a dismounting direction of said photoconductive drum and contains an axis of said photoconductive drum.

129. The apparatus as claimed in claim 117, wherein

said image forming means is constructed into a unit constituting a body, and

said image carrier is mounted to or dismounted from said body as an image carrier unit including members associated therewith.

130. The apparatus as claimed in claim 129, wherein said image carrier is removable from said apparatus independently of said developing device, and

said apparatus further comprises image carrier holding means including image carrier locking means for locking said image carrier to said body by engaging with a lug included in said body.

131. The apparatus as claimed in claim 130, wherein said image carrier holding means is angularly movable relative to said image carrier, and

said image carrier is locked to said apparatus when said image carrier locking means, which is mounted on a shaft of said image carrier holding means, engaged with said lug of said body.

132. The apparatus as claimed in claim 117, wherein an image transferring device faces said image carrier at a side opposite to a side where said image forming means is positioned with respect to said image carrier, and

said image transferring device is constructed integrally with a roller, which feeds a recording medium

to said image transferring device, and angularly movable about an axis of said roller to thereby retract from a position above a dismounting direction of said image carrier.

133. The apparatus as claimed in claim 132, wherein said image carrier comprises image carrier holding means including a handle portion to be held by hand and a lock portion for locking said image transferring device to a body of an image forming section.

134. The apparatus as claimed in claim 133, wherein said image carrier holding means positions said image transferring means relative to said image carrier when angularly moved to lock said image carrier to said body.

135. The apparatus as claimed in claim 134, wherein said image carrier is removable from said apparatus independently of said developing means, and

said apparatus further comprises image carrier holding means including image carrier locking means for locking said image carrier to said body by engaging with a lug included in said body.

136. The apparatus as claimed in claim 135, wherein said image carrier holding means is angularly movable relative to said image carrier, and

said image carrier is locked to said apparatus when said image carrier locking means, which is mounted on a

shaft of said image carrier holding means, engaged with said lug of said body.

137. In an image forming apparatus comprising image forming means whose components are at least an image carrier and a developing device, a cleaning device and an image transferring device arranged around said image carrier, part of said components is removable from said image forming apparatus by being moved upward in a preselected direction in a preselected order,

any one of said components is unable to be dismounted from said image forming apparatus until the other component having priority with respect to the preselected order has been dismounted from said image forming apparatus, and

the components unremovable from said image forming apparatus and arranged at a position above the components removable in the preselected direction each are retractable from said position.

138. The apparatus as claimed in claim 137, wherein said image carrier is dismounted from said apparatus before the other components.

139. The apparatus as claimed in claim 137, wherein said image transferring device is retractable.

140. The apparatus as claimed in claim 139, wherein, said image transferring device forms at least part of means

contributing to image transfer and is mounted on an openable member, and

when said openable member is opened, said image transferring device retracts from said position to thereby form a space for mounting or dismounting said image transferring device.

141. The apparatus as claimed in claim 137, the components are mounted on a body of said apparatus and an openable member openably mounted on said body, and

a position for mounting said image carrier is closest to a space to be formed above said body when said openable member is opened.

142. The apparatus as claimed in claim 141, wherein the preselected direction is upward, and

when said openable member is angularly moved, at least a position above said body is open and allows said image transferring device to be mounted or dismounted.

143. The apparatus as claimed in claim 137, wherein said image transferring device comprises image transferring means for transferring a toner image from said image carrier to an intermediate image transfer body and said intermediate image transfer body.

144. The apparatus as claimed in claim 137, wherein indication means is provided on at least components of said image forming means for indicating an order in which said

component should be mounted or dismounted from a body of said apparatus.

145. The apparatus as claimed in claim 137, comprising a developing device support portion for supporting said developing device, and drive means support portion for supporting drive means that drives said image carrier, wherein said developing device and said drive means are positioned relative to each other by positioning members mounted on an unmovable portion of a body of said apparatus.

146. The apparatus as claimed in claim 137, wherein said developing device is lockable and unlockable, either singly or together with process means other than said image carrier, from a body of said apparatus or from positioning members mounted on said body.

147. The apparatus as claimed in claim 146, wherein said process means other than said image carrier comprises said cleaning device.

148. The apparatus as claimed in claim 137, wherein said image carrier is mounted to or dismounted from said apparatus either singly or together with a member associated therewith.

149. The apparatus as claimed in claim 137, wherein said cleaning device comprises at least cleaning means for cleaning said image carrier and removably mounted to said

apparatus singly to be thereby positioned relative to said image carrier.

150. The apparatus as claimed in claim 137, wherein said cleaning device comprises at least cleaning means for cleaning said image carrier, which is included in an image carrier unit, and charging means for uniformly charging a surface of said image carrier,

said cleaning device is removably mounted to said developing device singly to thereby position said charging means and said image carrier relative to each other.

151. The apparatus as claimed in claim 150, wherein said cleaning device is constructed integrally with a waste developer storage that stores a developer removed from said image carrier, and is removably mounted to said developing device.

152. The apparatus as claimed in claim 137, wherein said cleaning device is partly movable toward and away from said image carrier.

153. The apparatus as claimed in claim 152, wherein said cleaning device is removably accommodated in a cleaning case that is angularly movably mounted on said developing device, and

said cleaning case causes said cleaning device to move toward or away from said image carrier when angularly moved.

154. The apparatus as claimed in claim 153, wherein said cleaning case includes a locking mechanism for selectively locking or unlocking said cleaning device, and said cleaning device is removably mounted to said cleaning case alone.

155. The apparatus as claimed in claim 154, wherein said locking mechanism adjoins said image carrier, and when said image carrier is present on said body, said image carrier is located, in a range for operating said locking mechanism, at a position where said locking mechanism is unable to be operated.

156. The apparatus as claimed in claim 154, wherein said locking mechanism includes discharging means for discharging a surface of said image carrier.

157. The apparatus as claimed in claim 156, wherein said discharging means is movable toward or away from said image carrier when said cleaning device is moved toward or away from said image carrier.

158. The apparatus as claimed in claim 137, wherein discharging means for discharging a surface of said image carrier is constructed integrally with said image carrier.

159. The apparatus as claimed in claim 137, wherein said cleaning device is removable from a body of said apparatus only after said image carrier has been removed from said body.

160. The apparatus as claimed in claim 159, wherein said cleaning device is allowed to be removed from said body only after part of said cleaning device has been spaced from said image carrier to thereby allow said image carrier to be removed.

161. The apparatus as claimed in claim 137, wherein said developing device comprises a locking mechanism for selectively locking or unlocking said image carrier to or from said developing device, and

an image carrier unit including said image carrier is removably mounted to said developing device alone.

162. The apparatus as claimed in claim 137, wherein said developing device comprises a locking mechanism for selectively locking or unlocking an image carrier unit, which includes said image carrier, and said cleaning device to or from said developing device at the same time, and

said image carrier and said cleaning device are individually mounted to or dismounted from said developing device after said locking mechanism has been unlocked.

163. The apparatus as claimed in claim 137, wherein said developing device is allowed to be dismounted from a body of said apparatus only after said image carrier has been dismounted from said body.

164. The apparatus as claimed in claim 137, wherein said image forming means comprises a plurality of image

forming means arranged around said image transferring device.

165. In an image forming apparatus comprising image forming means whose components are at least an image carrier and a developing device, a cleaning device and an image transferring device arranged around said image carrier, part of said components is mountable to said image forming apparatus by being moved in a preselected direction in a preselected order,

any one of said components is unable to be mounted to said image forming apparatus until the other component having priority with respect to the preselected order has been mounted to said image forming apparatus, and

the components unremovable from said image forming apparatus and arranged at a position above the components removable in the preselected direction each are retractable from said position.

166. The apparatus as claimed in claim 165, wherein said image carrier is mounted to said apparatus after the other components.

167. The apparatus as claimed in claim 165, wherein said image transferring device is retractable.

168. The apparatus as claimed in claim 165, wherein the components are mounted on a body of said apparatus and an openable member openably mounted on said body, and

a position for mounting said image carrier is closest to a space to be formed above said body when said openable member is opened.

169. The apparatus as claimed in claim 168, wherein, said image transferring device forms at least part of means contributing to image transfer and is mounted on an openable member, and

when said openable member is opened, said image transferring device retracts from said position to thereby form a space for mounting or dismounting said image transferring device.

170. The apparatus as claimed in claim 168, wherein the preselected direction is upward, and

when said openable member is angularly mode, at least a position above said body is open and allows said image transferring device to be mounted or dismounted.

171. The apparatus as claimed in claim 165, wherein said image transferring device comprises image transferring means for transferring a toner image from said image carrier to an intermediate image transfer body and said intermediate image transfer body.

172. The apparatus as claimed in claim 165, wherein indication means is provided on at least components of said image forming means for indicating an order in which said component should be mounted or dismounted from a body of

said apparatus.

173. The apparatus as claimed in claim 165, comprising a developing device support portion for supporting said developing device, and drive means support portion for supporting drive means that drives said image carrier, wherein said developing device and said drive means are positioned relative to each other by positioning members mounted on an unmovable portion of a body of said apparatus.

174. The apparatus as claimed in claim 165, wherein said developing device is lockable and unlockable, either singly or together with process means other than said image carrier, from a body of said apparatus or from positioning members mounted on said body.

175. The apparatus as claimed in claim 174, wherein said process means other than said image carrier comprises said cleaning device.

176. The apparatus as claimed in claim 165, wherein said image carrier is mounted to or dismounted from said apparatus either singly or together with a member associated therewith.

177. The apparatus as claimed in claim 165, wherein said cleaning device comprises at least cleaning means for cleaning said image carrier and removably mounted to said apparatus singly to be thereby positioned relative to said

image carrier.

178. The apparatus as claimed in claim 165, wherein said cleaning device comprises at least cleaning means for cleaning said image carrier, which is included in an image carrier unit, and charging means for uniformly charging a surface of said image carrier,

said cleaning device is removably mounted to said developing device singly to thereby position said charging means and said image carrier relative to each other.

179. The apparatus as claimed in claim 178, wherein said cleaning device is constructed integrally with a waste developer storage that stores a developer removed from said image carrier, and is removably mounted to said developing device.

180. The apparatus as claimed in claim 165, wherein said cleaning device is partly movable toward and away from said image carrier.

181. The apparatus as claimed in claim 180, wherein said cleaning device is removably accommodated in a cleaning case that is angularly movably mounted on said developing device, and

said cleaning case causes said cleaning device to move toward or away from said image carrier when angularly moved.

182. The apparatus as claimed in claim 181, wherein

said cleaning case includes a locking mechanism for selectively locking or unlocking said cleaning device, and said cleaning device is removably mounted to said cleaning case alone.

183. The apparatus as claimed in claim 182, wherein said locking mechanism adjoins said image carrier, and when said image carrier is present on said body, said image carrier is located, in a range for operating said locking mechanism, at a position where said locking mechanism is unable to be operated.

184. The apparatus as claimed in claim 182, wherein said locking mechanism includes discharging means for discharging a surface of said image carrier.

185. The apparatus as claimed in claim 184, wherein said discharging means is movable toward or away from said image carrier when said cleaning device is moved toward or away from said image carrier.

186. The apparatus as claimed in claim 165, wherein discharging means for discharging a surface of said image carrier is constructed integrally with said image carrier.

187. The apparatus as claimed in claim 165, wherein said cleaning device is removable from a body of said apparatus only after said image carrier has been removed from said body.

188. The apparatus as claimed in claim 187, wherein

said cleaning device is allowed to be removed from said body only after part of said cleaning device has been spaced from said image carrier to thereby allow said image carrier to be removed.

189. The apparatus as claimed in claim 165, wherein said developing device comprises a locking mechanism for selectively locking or unlocking said image carrier to or from said developing device, and

an image carrier unit including said image carrier is removably mounted to said developing device alone.

190. The apparatus as claimed in claim 165, wherein said developing device comprises a locking mechanism for selectively locking or unlocking an image carrier unit, which includes said image carrier, and said cleaning device to or from said developing device at the same time, and

said image carrier and said cleaning device are individually mounted to or dismounted from said developing device after said locking mechanism has been unlocked.

191. The apparatus as claimed in claim 165, wherein said developing device is allowed to be dismounted from a body of said apparatus only after said image carrier has been dismounted from said body.

192. The apparatus as claimed in claim 165, wherein said image forming means comprises a plurality of image forming means arranged around said image transferring

device.

193. An image carrier unit comprising:

an image carrier around which a developing device, a cleaning device and an image transferring device are arranged as components of an image forming apparatus; and a holder protruding from a surface portion of said image carrier.

194. The unit as claimed in claim 193, further comprising inputting means for inputting power for driving said image carrier.

195. The unit as claimed in claim 194, wherein part of said components is removable from said image forming apparatus by being moved upward in a preselected direction in a preselected order,

any one of said components is unable to be dismounted from said image forming apparatus until the other component having priority with respect to the preselected order has been dismounted from said image forming apparatus, and

the components unremovable from said image forming apparatus and arranged at a position above the components removable in the preselected direction each are retractable from said position.

196. The unit as claimed in claim 194, wherein part of said components is mountable to said image forming

apparatus by being moved in a preselected direction in a preselected order,

any one of said components is unable to be mounted to said image forming apparatus until the other component having priority with respect to the preselected order has been mounted to said image forming apparatus, and

the components unremovable from said image forming apparatus and arranged at a position above the components removable in the preselected direction each are retractable from said position.

197. In a method of assembling an image forming apparatus, a developing device is mounted to a body of said image forming apparatus, a cleaning device is mounted to said developing device, and then an image carrier unit is mounted.

198. The method as claimed in claim 197, wherein said cleaning device is mounted to said developing device beforehand to thereby constitute a subassembly, said subassembly is mounted to a body of said image forming apparatus or positioning members, and then said image carrier unit is mounted.

199. In a method of assembling an image forming apparatus, positioning members each including a support portion for supporting a developing device and a support portion for supporting drive means, which drives an image

carrier, are mounted to a body of said image forming apparatus, said developing device is mounted to said positioning members, and then an image carrier unit is mounted.

200. The apparatus as claimed in claim 199, wherein said cleaning device is mounted to said developing device beforehand to thereby constitute a subassembly, said subassembly is mounted to a body of said image forming apparatus or positioning members, and then said image carrier unit is mounted.